



NCR: Yes / No

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS										
Part No. _____	<input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update		<input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab		<input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite		<input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier		<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other						
NCR No. _____															
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector				
Doc/Data															
Equip/Tooling															
Operator															
Material															
Setup															
Other															
Process															
Supplier															
Training															
Unapproved															
FAULT CATEGORY															
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

Work Order ID 101476

\*101476\*

Page 2

May-13-13 1:02:36 PM

Item ID: D3238-15

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Plate

Start Date: 5/13/13

Start Qty: 10.00

\*10\*

Cust Item ID:

Required Date: 5/31/13

Req'd Qty: 10.00

\*10\*

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

\*130\*

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

10 761343

140

\*140\*

QC

Quality Control

QC3 Inspect Part Finish

0.00

QAS

0.00 B.6.3

10

150

\*150\*

Packaging

Packaging

Identify as per dwg & Stock Location: ST634

0.00

Memo

0.00

10X

SP  
B-6-3.

NCR: Yes / No

DQA: Date:

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>					
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector	
Doc/Data	<input type="checkbox"/>												
Equip/Tooling	<input type="checkbox"/>												
Operator	<input type="checkbox"/>												
Material	<input type="checkbox"/>												
Setup	<input type="checkbox"/>												
Other	<input type="checkbox"/>												
Process	<input type="checkbox"/>												
Supplier	<input type="checkbox"/>												
Training	<input type="checkbox"/>												
Unapproved	<input type="checkbox"/>												
FAULT-CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
												<input type="checkbox"/> Other	

**Work Order ID 101476****\*101476\***

Page 3

May-13-13 1:02:36 PM

Item ID: D3238-15

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Plate

Stop

**\*NS2\***

Start Date: 5/13/13 Start Qty: 10.00

**\*10\***

Cust Item ID:

Required Date: 5/31/13 Req'd Qty: 10.00

**\*10\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

**\*160\***

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

13/6/4 JJ

J. Bokul

NCR: Yes / No

DQA: Date:

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS								
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup														
Other														
Process														
Supplier														
Training														
Unapproved														
FAULT CATEGORY														
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
													<input type="checkbox"/> Other	

# Picklist Print

May-13-13 1:02:35 PM

Page 1

Work Order ID: 101476

Parent Item: D3238-15

Parent Item Name: Plate

Start Date: 5/13/13

Required Date: 5/31/13

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A New Issue 06-10-20 EC  
IPP Rev:B Now on Waterjet 07-01-26 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.020 5052-H32 .020 Sheet		Purchased	No			100	sf	0.0000	0.012	0.126316 0.25		Jm13-6-3	

6061-T6 0.020

119743

119743

NCR: Yes / No

DQA: Date:

## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order:				DISPOSITION		AGAINST DEPARTMENT/PROCESS																	
				Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Water Jet	<input type="checkbox"/>	Engineering	<input type="checkbox"/>										
				Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Quality	<input type="checkbox"/>										
				Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Other	<input type="checkbox"/>										
				Work Order Update	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Supplier	<input type="checkbox"/>												
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector												
Doc/Data																							
Equip/Tooling																							
Operator																							
Material																							
Setup																							
Other																							
Process																							
Supplier																							
Training																							
Unapproved																							
FAULT CATEGORY																							
Landing Gear				General																			
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio								<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
																				<input type="checkbox"/> Other			

DART AEROSPACE LTD	Work Order:	101476
Description: Plate	Part Number:	D3238-15
Inspection Dwg: D3238	Rev: C	Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

— 10 —

Measured by:	Jm	Audited by:	27	Prototype Approval:	N/A
Date:	13-6-3	Date:	13-6-3	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue	KJ/JLM	
B	07.02.23	Dwg Rev. updated	KJ/JLM	

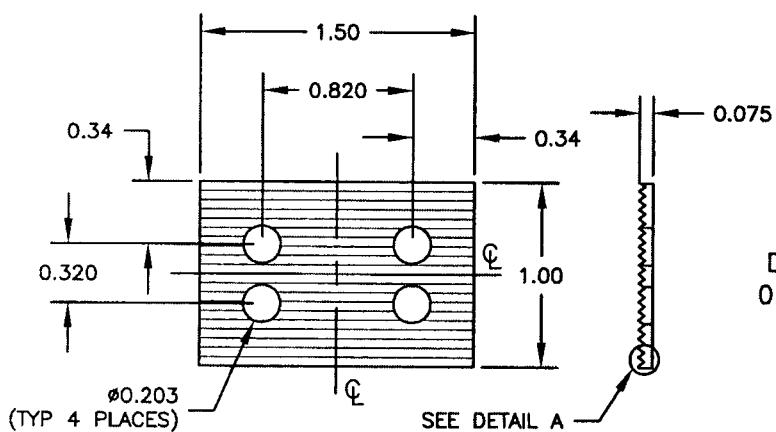
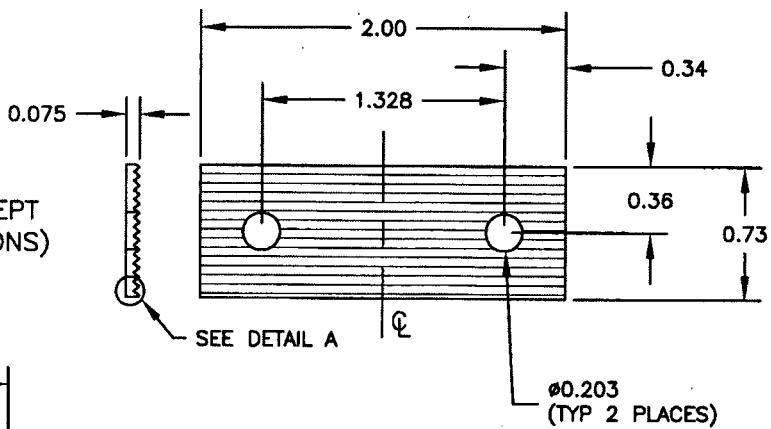
**DART**

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKSBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D3238
DATE		REV. C
07.02.19		SHEET 1 OF 3
		SCALE 1:1
A	03.11.25	NEW ISSUE
B	07.01.17	ADD -21/-23/-25/-31/-33/-35; CHANGE -11/-13/-15 TO 6061-T6
C	07.02.19	ADD 5052-H32 OPTION

RELEASED

07.02.20

**D3238-1 PLATE (SHOWN)**  
D3238-11 PLATE (SAME, EXCEPT  
0.020 THICK AND NO SERRATIONS)



**D3238-3 PLATE (SHOWN)**  
D3238-13 PLATE (SAME, EXCEPT  
0.020 THICK AND NO SERRATIONS)

## NOTES:

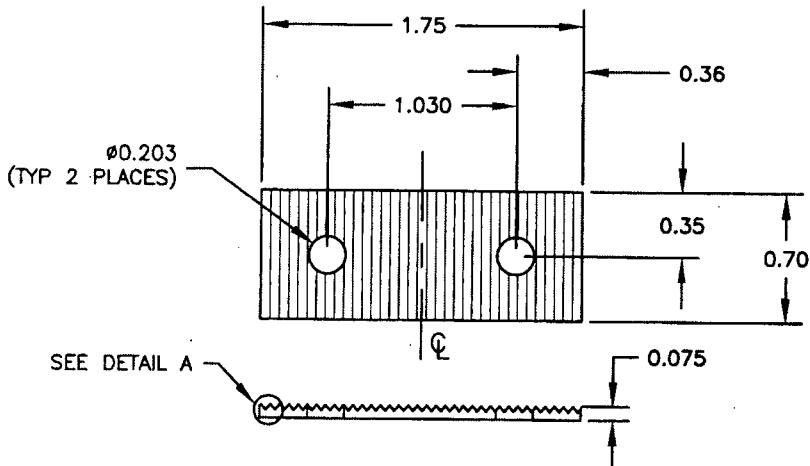
- 1) MATERIAL -1/-3/-5/-21/-23/-25 PLATE:  
ALUMINUM 2024-T3 SHEET PER QQ-A-250/4 OR AMS 4037  
(REF DART SPEC M2024T3S)
- 11/-13/-15/-31/-33/-35 PLATE:  
ALUMINUM 6061-T6/-T62 SHEET, 0.020 THICK, PER QQ-A-250/11 OR  
AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.020)  
OR  
ALUMINUM 5052-H32 SHEET, 0.020 THICK, PER QQ-A-250/8 OR  
AMS 4016 (REF DART SPEC M5052H32S.020)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) SEE SHEET 3 FOR DETAIL A
- 7) PARTS ARE SYMMETRIC ABOUT  $\frac{1}{2}$

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# DART

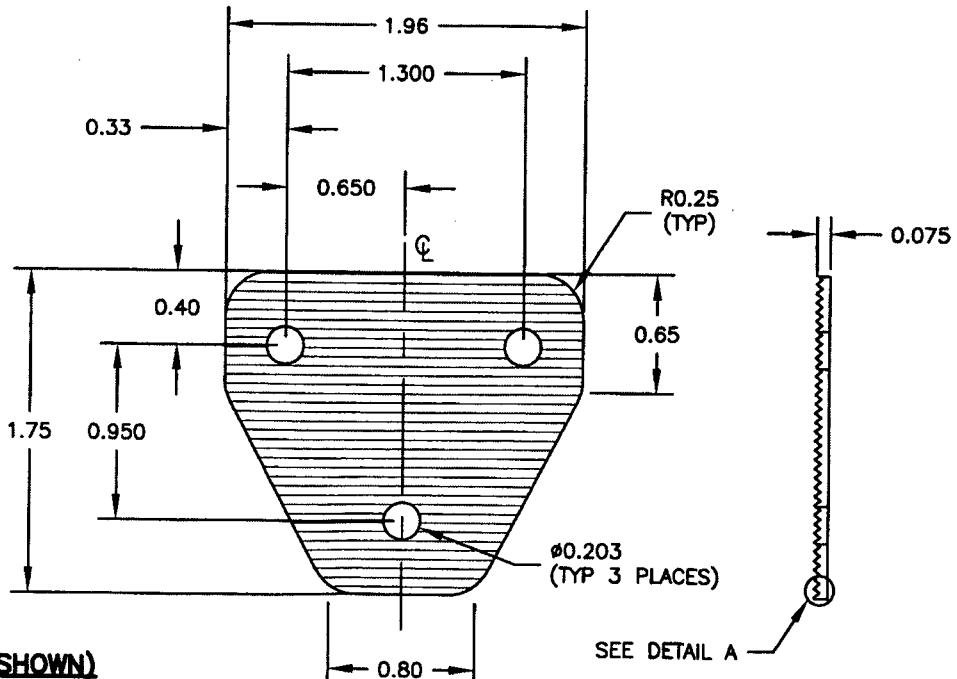
DESIGN <i>4</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>CE</i>	APPROVED <i>TH</i>	DRAWING NO. D3238	REV. C	SHEET 2 OF 3
DATE 07.02.19	TITLE PLATE		SCALE 1:1	



RELEASED

07.02.20

**D3238-5 PLATE (SHOWN)**

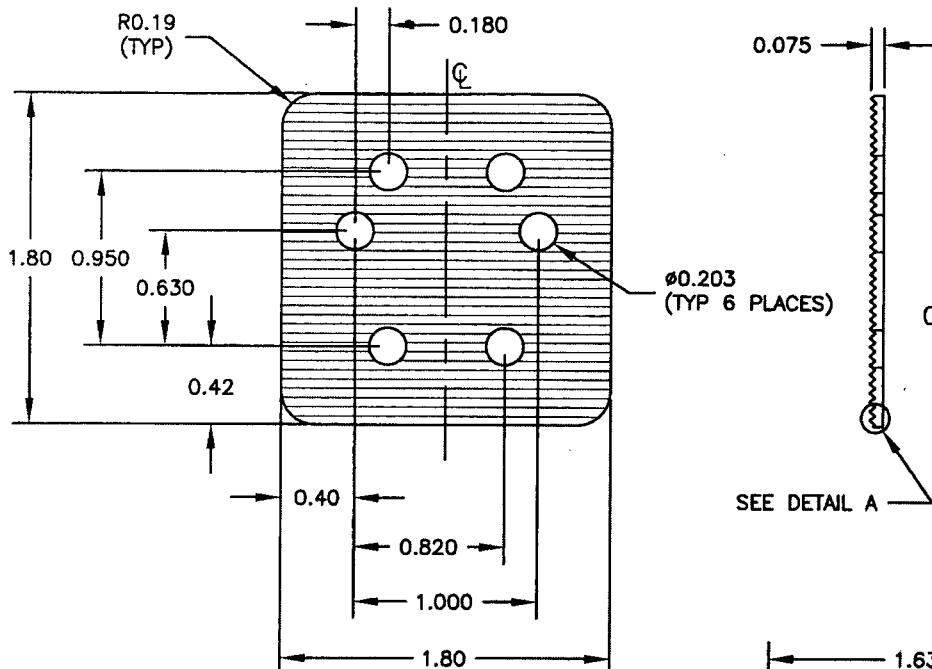


D3238-21 PLATE (SHOWN)

optical

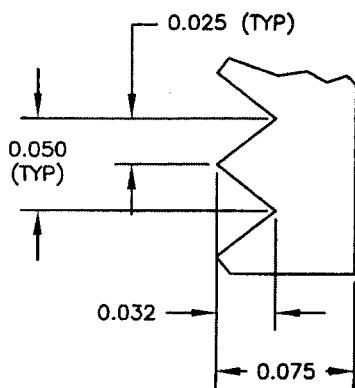
**DART**

DESIGN <i>#</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>CE</i>	APPROVED <i>CH</i>	DRAWING NO. D3238	REV. C	SHEET 3 OF 3
DATE 07.02.19	TITLE PLATE		SCALE 1:1	

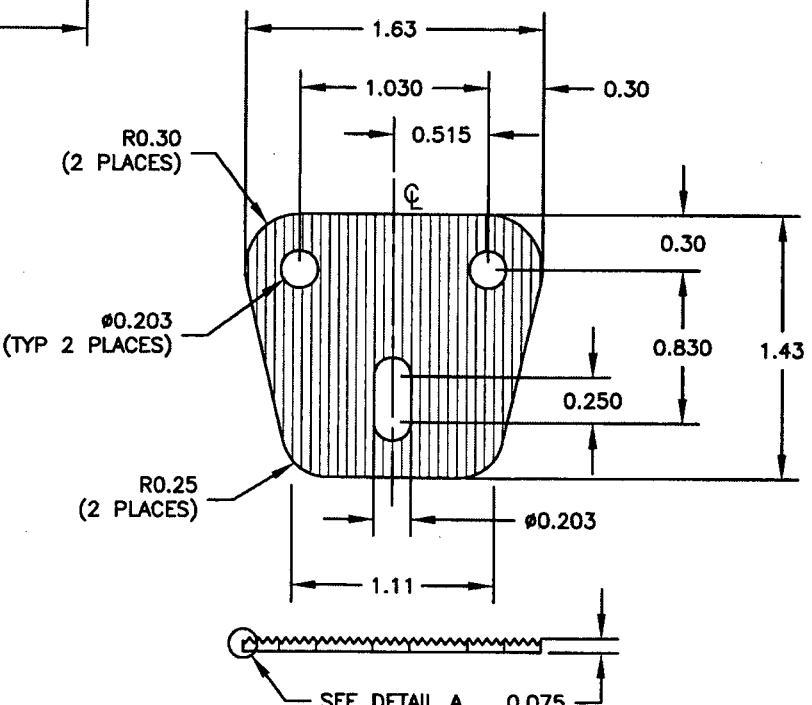


RELEASED  
07.02.20 *[Signature]*

**D3238-23 PLATE (SHOWN)**



**DETAIL A**  
RIDGE DETAIL (VIEW MAY BE ROTATED)  
SCALE 10:1



D3238-25 PLATE (SHOWN)

D3238-35 PLATE (SAME, EXCEPT  
0.020 THICK AND NO SERRATIONS)

9th/01